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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/089,426
Filing Date: March 29, 2002
Appellant(s): PIHLAJA, JUHA

Geza C. Ziegler, Jr.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on 04/01/2009 appealing from the Office action mailed 08/23/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US Pat: 5,617,412	Delprat et al	4-1997
US Pat: 6,556,830	Lenzo	4-2003

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delprat et al. [US Pat: 5,617,412] in view of Lenzo [US Pat: 6,556,830].

Regarding claims 1-2, Delprat et al. in the invention of “Frame/Multiframe Structure FDMA System and Corresponding Signal” disclosed a method for providing wireless point-to-multipoint connections having an access point (**base station, SB of Fig1**) using full-duplex mode and terminals (**mobile stations, SMs of Fig 1**) using half-duplex mode wherein that, (**col 6, lines 14-23**) each of a plurality of the terminals has an equipment identifier (**Fig4, unit1, unit 2, col 8, lines 11-19, Fig 1, SM11, SM22, col 6, lines 4-13**) each of said plurality of the terminals is arranged to classify itself as belonging to a first group of terminals (**group 21 of Fig 1**) or a second group (**group 22 of Fig 1**) of terminals based on said equipment identifier according to a predefined rule (**based on frequency, col 6, lines 4-33**); and the access point is arranged to send a first broadcast message to said first group of terminals and a second broadcast message to said second group of terminals (**col 2, lines 43-47, col 3, lines 58-65**), but fails to disclose that the access point (**base station**) is arranged to schedule the transmission period of at least one terminal of said first or second group to overlap at least partly with the transmission period of said first or second broadcast message. However Lenzo disclosed in the invention of “Coverage Area Sectorization in Time Division Multiple Access/Frequency-Time Division Duplex Communications Systems” disclosed a method where base station (**access point**) is arranged to schedule the transmission period of one group of terminals to overlap with the second group of terminals in order to maintain synchronization (**Figs 4-7, col 6, lines 65-67, col 7, lines 1-11, col 7, lines 33-**

67, col 8, lines 1-19, col 9, lines 26-67, col 10, lines 1-9). Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention was made to use the method of scheduling overlapping transmission and reception periods of first and second group terminals as taught by Lenzo in the system of Delprat et al. to enable access point to schedule transmission period of at least one terminal of said first or second group to overlap at least partly with the transmission period of said first or second broadcast message. One is motivated as such to simultaneously schedule both listening and transmission periods of first group, second group terminals at the access point without loss of synchronization between the access point and the terminals belonging to first and second groups.

Regarding claim 3, Delprat et al. disclosed that access point of a point-to-multipoint wireless link system **(base station, SB of Fig 1)**, wherein that the access point is arranged to send a first broadcast message in a frame to a first group **(police department group)** of terminals and a second broadcast message in said frame to a second group of terminals **(fire department group) (col 3, lines 12-20)**, but fails to disclose that the access point is arranged to schedule the transmission period of at least one terminal of said first or second group to overlap at least partly with the transmission period of said first or second broadcast message. However, Lenzo disclosed a method where base station **(access point)** is arranged to schedule the transmission period of one group of terminals to overlap with the second group of terminals in order to maintain

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synchronization (**Figs 4-7, col 6, lines 65-67, col 7, lines 1-11, col 7, lines 33-67, col 8, lines 1-19, col 9, lines 26-67, col 10, lines 1-9**). Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention was made to use the method of scheduling overlapping transmission and reception periods transmission and reception periods of first or second group terminals as taught by Lenzo in the system of Delprat et al. to enable access point to schedule transmission period of at least one terminal of said first or second group to overlap at least partly with the transmission period of said first or second broadcast message. One is motivated as such in order to simultaneously schedule both listening and transmission periods of first group, second group terminals at the access point without loss of synchronization between the access point and the terminals belonging to first and second groups.

Regarding claim 4, Delprat et al. disclosed that terminal of a point-to-multipoint wireless link system, which terminal has an equipment identifier (**Fig4, unit1, unit 2, col 8, lines 11-19, Fig 1, SM11, SM22, col 6, lines 4-13**), characterized in that the terminal is arranged to classify itself as belonging to a first group of terminals (**group 21 of Fig 1**) or a second group of terminals (**group 22 of Fig 1**) based on the equipment identifier according to a predefined rule (**based on frequency, col 6, lines 4-33**); the terminal is arranged to receive a first broadcast message if it belongs to said first group (**first group, item 2₁ of Fig 1**) and a second broadcast message if it belongs to said second group (**second group, item 2₂ of Fig 1, col 6, lines 4-17**) but fails to disclose that the

transmission period of the terminal is arranged to overlap at least partly with a transmission period of said first broadcast message if it belongs to said second group. However, Lenzo disclosed a method where base station (**access point**) is arranged to schedule the transmission period of one group of terminals to overlap with the second group of terminals in order to maintain synchronization (**Figs 4-7, col 6, lines 65-67, col 7, lines 1-11, col 7, lines 33-67, col 8, lines 1-19, col 9, lines 26-67, col 10, lines 1-9**). Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention was made to use the method of scheduling overlapping transmission and reception periods transmission and reception periods of first or second group terminals as taught by Lenzo in the system of Delprat et al. to enable access point to schedule transmission period of at least one terminal of said first or second group to overlap at least partly with the transmission period of said first or second broadcast message. One is motivated as such in order to simultaneously schedule both listening and transmission periods of first group, second group terminals at the access point to without loss of synchronization between the access point and the terminals belonging to first and second groups.

Regarding claim 5, Delprat et al. disclosed wherein the terminal is arranged to perform the classification based on the value of the least significant bit of the identifier (**Fig 4, col 8, lines 11-24**).

Regarding claim 6, Delprat et al. disclosed a method for providing wireless point-to-multipoint connections between an access point (**base station**,

SB of Fig1) and a plurality of terminals (**mobile stations, SMs of Fig 1**), wherein: the terminals are grouped into a first group (**groups 21 of Fig 1**) and a second group (**groups 22 of Fig 1, col 6, lines 4-13**), during a transmission frame, the access point sends a first broadcast message to terminals in the first group and a second broadcast message to terminals in the second group (**col 2, lines 43-47, col 3, lines 58-65**), but fails to disclose that at least one of the terminals of the second group is scheduled to transmit during at least a part of the transmission period of said first broadcast message, However, Lenzo disclosed a method where base station (**access point**) is arranged to schedule the transmission period of one group of terminals to overlap partially with the second group of terminals in order to maintain synchronization (**Figs 4-7, col 6, lines 65-67, col 7, lines 1-11, col 7, lines 33-67, col 8, lines 1-19, col 9, lines 26-67, col 10, lines 1-9**). Therefore it would have been obvious for one of the ordinary skill in the art at the time the invention was made to use the method of scheduling partially overlapping transmission and reception periods transmission and reception periods of first or second group of terminals as taught by Lenzo in the system of Delprat et al. to enable at least one of the terminals of the second group to schedule transmission during at least part of the transmission period of first broadcast message. One is motivated as such in order to overlap transmit periods of second group terminals with that of the transmission period of first broadcast message without the loss of synchronization between the access point and the terminals belonging to first and second groups.

Regarding claim 7, Delprat et al. disclosed wherein at least one of the terminals of the first group is scheduled to transmit during at least a part of the transmission period of said second broadcast message (**col 6, lines 34-67, col 7, lines 1-34**).

Regarding claims 8-11, Delprat et al disclosed that said broadcast message comprises of at least one of control information (**control frame, col 7, lines 1-22**), or information about an access time slot (**Figs 1,8, col 6, lines 4-33**), and said control information is composed of the identifier of the access point (base station), identifier of the network operator (sending network), or identifier of the transmission sector (**col 3, lines 50-67, col 4, lines 1-55**).

Regarding claims 14-17, Delprat et al disclosed that at least one of said broadcast messages comprises control information (**col 2, lines 50-64**).

Regarding claims 12-13, Delprat et al disclosed that the wireless communication system comprising only a single access point (**SB of Fig 1, col 5, lines 64-67**).

(10) Response to Argument

Claims 1,3,4,6:

With respect to appellant's argument for claims 1, 3, 4 and 6 that the combination of Delprat and Lenzo does not disclose or suggest the limitation of

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access point is arranged to send a first broadcast message to the first group of terminals and a second broadcast message to the second group of terminals. The combination of Delprat and Lenzo does not disclose or suggest these features.

However the Examiner respectfully disagrees as Delprat disclosed a system for providing wireless point-to-multipoint connections comprising an access point (base station, SB of Fig 1) using full duplex mode (column 6, lines 16-18) and terminals (SMs of Fig 1) using half-duplex mode (column 6, lines 14-16) where in the base station transmits (broadcasting) a first group of frames (f1,f'1...in Fig 1) to a first group of terminals (SMs in item 21 of Fig 1) and a second groups of frames (f2,f'2... in Fig 1) to a second group of terminals (SMs in item 22 of Fig 1) in column 6, lines 16-22 and further disclosed transmitting the frames according to a predefined rule by grouping the frames with a predetermined number of frames including at least one control frame in column 6, lines 18-29 and in column 6, lines 51-61.

With respect to appellant's argument that there is nothing in Delprat that discloses or suggests that the multiframe includes broadcast messages and Delprat cannot disclose that the access point is arranged to send a first broadcast message to the first group of terminals and a second broadcast message to the second group of terminals as recited in claims 1,3,4 and 6, however the examiner respectfully disagrees as Delprat disclosed that the base station transmits (broadcasts) first and second groups of frames (messages)

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simultaneously to first and second groups of terminals as in column 6, lines 14-18 and therefore Delprat disclosed the feature of access point (base station) is arranged to send a first broadcast message (f1,f' 1...in Fig 1) to the first group of terminals (SMs in item 21 of Fig 1) and a second broadcast message (f2,f' 2... in Fig 1) to the second group of terminals (SMs in item 21 of Fig 1) as recited in claims 1, 3, 4 and 6.

Delprat disclosed the feature of transmitting first and second groups of frames to first and second groups of terminals simultaneously (overlapping transmissions) and further disclosed methods for offsetting first and second groups of frames to first and second group of terminals in column 7, lines 22-27, but fails to positively disclose the access point is arranged to schedule the transmission period of at least one terminal of said first group to overlap at least partly with the transmission period of said second broadcast message.

Therefore the examiner used Lenzo reference to remedy this deficiency, as Lenzo disclosed a method where access point (base station, B40 of Fig 4A) is arranged to schedule the transmission period of at least one terminal of the first group to overlap at least partly with the transmission period of second broadcast message in col 6, lines 65-67, col 7, lines 1-11, column 7, lines 33-67, column 8, lines 1-55, Figs 4A-C, Fig 5 and further disclosed a mechanism for overlapping transmissions from the base station to the terminals in column 9, lines 26-67, column 10, lines 1-9.

Therefore obviousness can be established by combining the teachings of Delprat and Lenzo references where there is some teaching, suggestion or motivation to produce the result of arranging the access point to schedule the transmission period of at least one terminal of said first group to overlap at least partly with the transmission period of said second broadcast message as claimed by the appellant.

With respect to appellant's argument for claims 1,3,4,6 that Lenzo fail to disclose that base station (access point) is arranged to schedule the transmission period of at least one terminal of the second group to overlap at least partly with the transmission period of the first broadcast message, however the examiner respectfully disagrees as Lenzo disclosed that each of the base station (access point) communicates with the mobile stations (terminals) in accordance with both time and frequency division duplex systems (TDMA/FDD) in column 3, lines 28-67 and further disclosed that base station (B30 Fig 3A) and terminals (M30 Fig 3A) and a method for overlapping transmission and receptions of base station with the terminals in Fig 3B in column 6, lines 6-17. Lenzo disclosed a method of overlapping transmission from base station with the mobile stations (terminals) and vice-versa in col 6, lines 65-67, col 7, lines 1-11, column 7, lines 33-67 and column 8, lines 1-55, Figs 4A-C, Fig 5. Therefore obviousness can be established by combining the teachings of Delprat and Lenzo references where there is some teaching, suggestion or motivation to produce the result of arranging the base station (access point) to schedule the transmission period of

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at least one terminal of the second group to overlap at least partly with the transmission period of the first broadcast message as claimed by the appellant in claims 1,3,4,6.

With respect to appellant's argument that Delprat and Lenzo references have conflicting teachings and therefore is improper to combine, however the examiner respectfully disagrees as obviousness can be established by combining the teachings in the references where there is some teaching, suggestion or motivation to produce the desired result. In this case both Delprat and Lenzo disclosed their invention in the related art of wireless communication system and Delprat teaches the feature of base station (access point) simultaneously send to mobile stations and receive from other mobile stations (SM1₁ and SM2₂ in Fig 2) from different groups (for example send to SM1₁ item 21 and receive from SM2₂ item 22 of Fig 1) in col 6, lines 16-18 and Lenzo teaches the feature of overlapping transmission from base stations to a mobile station and receiving transmission from mobile station to a base station in Figs 4A-4C in col 6, lines 65-67, col 7, lines 1-11 and therefore Delprat and Lenzo teachings can be combined to establish obviousness to produce the desired result. by of arranging the base station (access point) to schedule the transmission period of at least one terminal of the second group to overlap at least partly with the transmission period of the first broadcast message as claimed by the appellants.

With respect to appellant's argument for claims 1,3,4,6 that Delprat fails to disclose that terminals are arranged as groups to receive simultaneous broadcast messages transmitted from an access point as claimed by appellant, however the examiner respectfully disagrees as Delprat disclosed in col. 6, lines 4-18 that terminals (SMs in Fig 1) arranged as groups (items 21 and 22 in Fig 1) that receives simultaneous (overlapping) broadcast messages (frames) transmitted from an access point (bases station, SB in Fig 1).

Claims 2, 5, and 7-17:

The dependent claims 2, 5, and 7-17 are also unpatentable over the combination of Delprat and Lenzo at least by reason of their respective dependencies stated above.

Claims 8-11:

With respect to appellant's argument that Delprat and Lenzo reference alone or in combination fail to disclose the limitation as claimed in claims 8-11, that the broadcast message comprises of at least one of control information, or information about an access time slot, and said control information is composed of the identifier of the access point, identifier of the network operator, or identifier of the transmission sector, however the examiner respectfully disagrees as

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Delprat disclosed transmitting control information in a control frame and control information is composed of the identifier of the access point (base station) for uplink and downlink signaling in Fig 1, column 6, lines 4-33, in column 7, lines 1-22. Lenzo also disclosed that each terminal is configured to communicate with a base station in the sector in col 3, lines 34-41 and therefore claims 8-11 are unpatentable over the combination of Delprat and Lenzo.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Venkatesh Haliyur/

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